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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,833

09/23/2003

Michael T. Rowan

68865.001002

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21967

7590

08/08/2008

HUNTON & WILLIAMS LLP  
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EXAMINER

GU, SHAWN X

ART UNIT

PAPER NUMBER

2189

MAIL DATE

DELIVERY MODE

08/08/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 10/668,833	<b>Applicant(s)</b> ROWAN ET AL.	
	<b>Examiner</b> Shawn X. Gu	<b>Art Unit</b> 2189	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 22 July 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
 b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b) ☐ They raise the issue of new matter (see NOTE below);  
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
 5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
 6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
 The status of the claim(s) is (or will be) as follows:  
 Claim(s) allowed: \_\_\_\_\_.  
 Claim(s) objected to: \_\_\_\_\_.  
 Claim(s) rejected: 1-29.  
 Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
 13. ☐ Other: \_\_\_\_\_.

/Reginald G. Bragdon/  
 Supervisory Patent Examiner, Art Unit 2189

Continuation of 5. Applicant's reply has overcome the following rejection(s): rejection of claims 1-29 under 112(1) for failing to comply with the written description requirement. The Examiner only withdraws this rejection in view of the Applicant's clarification that "prior to execution of each write command" is intended to mean before the actual write operation is performed on the storage location of the old data after receiving a corresponding write request from the host. The Examiner previously interpreted "prior to execution" to mean before the execution of the actual write instruction on the host's processor.

Continuation of 11. does NOT place the application in condition for allowance because: Claim 17 is rejected under 35 U.S.C. 112(2) as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as invention. The limitation "the specified time" is indefinite because claim 14 recites "a specific time" on lines 15-16 and claim 16 recites "specifying ... a time" on lines 2-3. This is a new ground of rejection necessitated by the Applicant's amendment.

Regarding the argument directed to the anticipation rejection of claim 1, the Examiner has explained in the rejection of claim 1 set forth in the final Office action mailed 22 May 2008 that Wu's current store is the Mirrored Volumes 240 since the mirrored volumes are synchronized with the original volumes and each update to the original volume is reflected on the mirrored volumes. The Applicant is also respectfully reminded that claim 1 does not teach that the current store may be used to restore a storage system to any previous point in time as argued by the Applicant on page 19 of the Applicant Arguments mailed 22 July 2008.

Regarding the argument that Wu fails to disclose or suggest "the time store is identified as a location of the old data if the old data was overwritten after the specified time, and the current store is identified as a location of the old data if the old data was not overwritten after the specified time", the Applicant is respectfully reminded that the Examiner clearly laid out in the previous Office action that Wu's T1 is the specified time since it is the time the restoring process is targeting. The Examiner then cited col. 10, lines 12-67 and Fig. 2 in Wu, where it is clearly taught that snapshots are stored in the current store/Mirrored Volumes 240 and the modification log provides the modifications between T1 and T2, with T2 being subsequent to T1. In order to recreate the snapshot at T1, the snapshot B created at T2 is retrieved from the current store/Mirrored Volumes 240 for restoration, and the time store/modification log is accessed for the pre-modification values for each modification between T1 and T2, and the two sources of data are merged to recreate the snapshot at T1. Therefore the snapshot data is used for a particular block if there is no modification between T1 and T2, otherwise pre-modification data retrieved from the modification log is used.

Regarding the argument that Wu fails to teach "continuously indexing by timestamp old data to be overwritten with new data prior to execution of each write command", the Examiner has specifically cited col. 4, lines 63-67 in Wu to show that Wu teaches a copy-on-write process, which is a process that backs up old data to be overwritten prior to the execution of the write operation. Wu also teaches in col. 6, lines 14-35 and 45-56, col. 8, lines 19-31 and col. 10, lines 12-67 that every pre-modification value is recorded in a modification log with associated timestamps before the pre-modification value is overwritten by new data.

The Applicant further argued that all claims in dependent form are allowable by virtue of their dependence on claims that are written in independent form. Since all arguments directed to the latter have been traversed by the Examiner as set forth above, all claims in dependent form stand rejected.